

ABSTRACT OF THE DISCLOSURE

A method for fabricating a CMOS image sensor including a low voltage buried photodiode and a transfer transistor, includes the steps of: forming a field oxide for defining active area and field area on certain area of an epitaxial layer formed on a substrate, and forming a gate of transfer transistor on the epitaxial layer of the active area; forming the low voltage buried photodiode doping region in alignment with one side of the gate of transfer transistor and field oxide; forming a spacer insulation layer by stacking layers of oxide and nitride over the whole structure; forming a spacer block mask to open areas excluding doping region for the low voltage buried photodiode; and removing the spacer block mask, and forming a floating diffusion region on other side of the transfer transistor. Alternatively, the sacrificial nitride may be allowed to remain on the surface of the photodiode to improve optical properties for short wavelength lights.